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Prevalence and characteristics of dual non responsiveness to aspirin and clopidogrel in a cohort of 430 stable cardiovascular patients. Insight from the adrie study on stable cardiovascular patients

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Background: Residual platelet reactivity (RPR) has been shown to be related to adverse cardiovascular events. However, assessment of residual platelet reactivity was often evaluated in heterogeneous populations including both patients with stable disease and acute coronary syndrome.

Objectives: We aim to delineate determinants of RPR in a cohort of stable cardiovascular patients.

Methods: We included 750 stable cardiovascular patients treated for at least one month with aspirin (n=213), clopidogrel (n=107) or both (n=425). We evaluated RPR using collagen platelet aggregation (CPA), collagen being a stimulus not directly involved in the specific pathways of aspirin and clopidogrel.

Results: Mean age was 65±12 years, 76% were male; the mean duration of the CV disease was 1.6 years. CPA ranged from 6% to 96% in our population. CPA was of 41±/-16, 61±/-14 and 28±/-15% in aspirin, clopidogrel and dual treatment groups, respectively (P<0.001). In univariate analysis of relevant biological and clinical parameters, antiplatelet drug treatment pattern (P<0.001), diabetes (P=0.006), hypertension (P=0.01) and a pain-free walking distance < 200^m (P=0.02) were associated with CPA. Multivariate analysis showed that antiplatelet drug treatment pattern (P<0.0001) and diabetes (P=0.0007) were independent factors associated with CPA.

Conclusion: Aspirin had a more pronounced effect on CPA than clopidogrel in stable cardiovascular patients. Even after adjustment for antiplatelet drug pattern, diabetes remains an independent factor associated with CPA. These results give new insight into the controversy about the beneficial effect of antiplatelet drugs in this particular group of patients

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Prognostic value of cortisol, insulin and thyroid hormones levels in ST elevation acute myocardial infarction

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Thyroid hormones, cortisol and insulin affect the metabolism of myocardial cells. Their secretion can be altered in case of ST elevation acute myocardial infarction (STEMI) and their prognostic value is not well established.

The aim of this study was evaluate the hormonal profile and its correlation with patient's outcome in STEMI.

Methods and results: 186 consecutive patients (162 males, 87%) with STEMI were prospectively enrolled. Blood sampling for insulin, cortisol, thyrostimulin (TSH), free thyroxin (FT4), triiodothyronin (T3) and free triiodothyronin (FT3) level measurements were performed in the 24 hours after admission. Patients who died within the first 24 hours were excluded. Mean follow-up period was 17.2 [12-28.8] months. We distinguished 2 groups, with (MACE1+) and without (MACE1-) in-hospital complications (Death and/or shock and/or left ventricular insufficiency and/or myocardial infarction and/or revascularization) and 2 groups, with (MACE2+) or without (MACE2-) late complications (Death and/or cardiac insufficiency and/or myocardial infarction and/or revascularization).The

mean age of patients was 58.4 ± 12.6 years. 77.9% were smokers, 35.4% were diabetics, 37% were hypertensive, 18.8% had a dyslipemia, 17.2% had a history of familial coronary disease and 4.3% of patients had a renal insufficiency. Hormonal levels were as follows: insulin=12.6±20.5 mU/l, cortisol=250.4±37 ng/ml, TSH=2.3±8.3μU/l, FT4=10.2±3 ng/l, T3=0.83±0.23 pg/l, FT3=2.04±3ng/l. Differences in hormonal levels between MACE1+ and MACE1- groups were significant for cortisol (289.5±304.9 vs 217.5±110.2 ng/l, p=0.033) and T3 (0.83±0.23 vs 0.77±0.2 pg/l, p=0.001). Threshold values determined by ROC curves were 380 ng/l for the cortisol and 0.95 pg/l for T3. In a multivariate model, only T3 was independently correlated with in-hospital outcome (OR=3.9, IC [1.6-9.8]). There was no correlation between hormonal levels and late outcome.

In Conclusion: T3 affect short but not long term STEMI prognosis. The usefulness of routine hormonal measurement and the therapeutic implications are still to determine.

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Management of patients with acute coronary syndrome undergoing percutaneous coronary intervention: one year follow-up results from the French cohort in the AntiPlatelet Treatment Observational study

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Purpose: To describe antiplatelet treatment patterns over 12 months in patients with acute coronary syndrome (ACS) undergoing percutaneous coronary intervention (PCI).

Methods: The AntiPlatelet Treatment Observational Registry (APTOR) is a prospective, international observational study that recruited ACS patients undergoing PCI in 2007-08, capturing practice patterns, treatment and resources use over 12 months. Interventional cardiologists collected data from ACS event to hospital discharge and general practitioners and cardiologists collected follow-up data.

Results: 483 eligible ACS-PCI patients had mean age 61 (13) years, mean weight 80 (15) kg, were 18% female, 47% with ST-elevation MI (STEMI) and 53% with unstable angina or non-ST elevation MI (UA/NSTEMI). Follow-up data up to 12 months are available for 396 (82%) patients. Among patients who were discharged and had follow-up data, 94% were receiving clopidogrel at time of hospital discharge. Cardiovascular combination therapy was prescribed as follows: aspirin (95%), statins (82%), beta-blockers (82%), ACE inhibitors/ARBs (68%); each of these treatments was globally maintained over 12 months. Lifestyle therapies increased over 12 months from 12% to 57% for formal diet program and 11% to 48% for formal exercise program. Over 12 months, on 394 patients, overall clopidogrel use was 94% at 30 days, 80% at 6 months, and 75% at 12 months. Amongst 83 patients who stopped clopidogrel before 12 months, 48% discontinued during the first three months.

Conclusions: These prospective data showed that after an ACS event 20% of patients have already dropped out their clopidogrel treatment at 6 months and 25% at 12 months.

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Enoxaparin Anticoagulation Monitoring in the Catheterization Laboratory Using a New Point-of-Care test

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Background: Inadequate anticoagulation in patients undergoing percutaneous coronary intervention (PCI) is associated with more frequent periprocedural ischemic events.

Methods: We evaluated the ability of the bedside Hemonox test to identify patients with an anti-Xa activity level out of the therapeutic range in 296 unse-